UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105

November 13, 2001

Mr. Gregory Lorton
BRAC Operations, Code 06CA.GL/0892
Department of the Navy, Southwest Division
Naval Facilities Engineering Command
1230 Columbia Street, Suite 1100
San Diego, CA 92101

RE: Draft Work Plan for IR Site 27 Remedial Investigation, Alameda Point

Dear Mr. Lorton:

EPA has reviewed the above referenced document, prepared by Bechtel Environmental, Inc. and submitted by the Navy on September 12, 2001. In general, the work plan appears satisfactory. Although there is currently no reason to believe that IR 27 could have high PAH contaminants present in the soil, taking only two samples may not provide sufficiently conclusive evidence that PAHs are not a problem. Also, even though the TDS is likely to be high bordering the eastern side of the Seaplane Lagoon, since the FWBZ in this area is hydraulically connected to an area that is considered a potential drinking water source MCLs may still apply as ARARs for this site. TDS levels alone will not be the deciding factor in this case.

Please call me at (415) 972-3029 if you have any questions.

Sincerely,

Anna-Marie Cook

Anna-Marie Cook
Remedial Project Manager

cc: Michael McClelland, SWDiv
Andrew Dick, SWDiv
Daniel Murphy, DTSC
Dennis Mishek, RWQCB
Elizabeth Johnson, City of Alameda
Michael John Torrey, RAB Co-Chair
Karla Brasaemle, Tech Law Inc

Review of the Draft Remedial Investigation Work Plan
IR Site 27, Dock Zone, Alameda Point

GENERAL COMMENTS

1. **Table 1, Step 2::** EPA does not like the use of the term "acceptable risk range" because it implies that risk in the 10^{-6} to 10^{-4} range is "acceptable." EPA considers an excess cancer risk level of 10^{-6} as the point of departure for considering when to implement remedial measures at a site. Cancer risks above a risk level of 10^{-4} generally require remediation. The range between 10^{-6} and 10^{-4} is referred to as the "risk management range," and decisions regarding whether remedial action is warranted are made on a case by case basis after consideration of all factors, of which the risk assessment is only one component.

2. For IR 27, TDS alone will not decide whether groundwater needs to be remediated to MCLs or not. The FWBZ beneath IR 27 is hydraulically connected to groundwater that is considered a potential drinking water source. Thus MCLs may apply as ARRAs if it is shown that the groundwater beneath IR 27 could adversely affect the quality of the water to the east of the site.

SPECIFIC COMMENTS

3. **Work Plan (WP) Section 1.3, Purpose and Scope of the Remedial Investigation, Page 2, and Field Sampling Plan (FSP) Section 1.3, Purpose and Scope of the Remedial Investigation, Page A1-5:** The text does not state if the Underground Storage Tank (UST) Removal and Environmental Baseline Survey (EBS) data were validated or if they are of a quality suitable for inclusion in a risk assessment. It appears that several detection limits were elevated, but the usability of the data is not discussed. Please state whether the UST and EBS data were validated, discuss data usability and specify if the EBS data will be used in the risk assessments.

4. **WP Section 1.3, Purpose and Scope of the Remedial Investigation, Page 3:** The text states that "these samples will assist in further delineating the extent of VOCs (including fuel oxygenates), PAHs and metals in groundwater." However, based on the text in the first two paragraphs of this section, groundwater samples will not be analyzed for polynuclear aromatic hydrocarbons (PAHs) or for semi-volatile organic compounds (SVOCs). How will the extent of PAHs in groundwater will be delineated?.

5. **WP Table 1, Step 7 and FSP Table 4-1, Step 7:** The second item states that

groundwater samples will be "collected at four locations along the eastern site boundary... for use in assessing potential upgradient sources." It appears that an assumption has been made that there are no sources within the site boundaries. There is no support for this assumption in the text; text in Step 1 states that "the horizontal and vertical extent of groundwater contamination is currently undefined." Please revise the groundwater sampling approach to include investigation of potential source areas within site boundaries.

6. **WP Table 1, Step 7 and FSP Table 4-1, Step 7:** It is unlikely that two samples for PAH contamination will be able to resolve whether there is a problem with this contaminant at IR Site 27. Please consider additional sampling locations to assess the extent of PAHs.

7. **WP, Figure 3 and FSP, Figure 2-8:** Please explain or revise this figure which shows groundwater samples collected at a depth of 0 feet at locations 15-3 and 15-1 ERM. The first water bearing zone (FWBZ) ranges from a depth of 5 to 18 feet below the ground surface (bgs).

8. **WP Figure 6 and FSP, Figure 4-1**: Please consider adding at least one additional soil sampling location in the western portion of the northern part of Site 27.

9. **FSP, Section 2.2.2, Geology, Page A2-3:** The description of the bay sediment unit is confusing. Please clarify the phrase "which has a maximum thickness of at least 6 feet." Specifically, it is unclear if the minimum thickness is 6 feet, or if the maximum thickness is an unspecified number greater than 6 feet.

10. **FSP, Section 4.2, Soil Gas Sampling, Page A4-2, Table 4-2, and Figure 4-1:** Table 4-2 indicates that there are 19 Phase 1 and 15 Phase 2 soil gas sample locations, but there is no distinction between Phase 1 and Phase 2 soil gas locations on Figure 4-1. The text states that a maximum of 34 active soil gas samples will be collected during Phase 1, which implies that all of the samples listed in Table 4-2 will be collected during Phase 1. Please resolve these discrepancies. Please also update the number of geophysical survey and land survey points in Table 4-2 as necessary.

11. **FSP, Section 4.4.2, Monitoring Well Sampling and Table 4-2**: The text in the work plan and in FSP Section 1.3 indicate that three rounds of groundwater samples will be collected from existing monitoring wells, but this is not reflected in Table 4-2 or Section 4.4.2.

12. **FSP Section 5.4.2, Hollow Stem Auger, Page A5-4 and Section 5.4.4, Air Rotary, Pages A5-4 and A5-5**: The text states that samples "for analysis of physical parameters will be removed...then the samples will be placed in a cooler with ice." Physical parameters include density, grain-size, liquid limits, etc. These samples do not require cooling.

13. **FSP Section 5.5, Monitoring Well Installation and Development, Page A5-5:** The text states that "a sample of the formation to be screened will be collected and analyzed for grain-size distribution." It is unclear if this analysis will be done in the field or in a laboratory. Please specify whether this analysis will be done in the field or in a laboratory, and if the latter, explain how the results will be obtained in time to select the screen slot size and filter pack material.

14. **FSP Section 5.5, Monitoring Well Installation and Development, Page A5-5:** The text describes how well development water will be handled, but does not specify how soil cuttings will be managed.

15. **FSP, Table 5-1:** The entry in the preservation column for Target Analyte List (TAL) metals indicates that only samples for mercury analysis will be preserved with nitric acid. All TAL metals analyses require field preservation of groundwater samples with nitric acid to pH < 2. Please delete the phrase "for mercury" from the preservation column for TAL metals. Also, the text on page A2-26 indicates that the only TAL metals that will be analyzed are copper, lead and thallium, but Table 5-1 includes the holding time for mercury. Please resolve this discrepancy and consistently indicate whether all TAL metals will be analyzed.

16. **FSP Table 5-2 and FSP Section 5.10, Sample Packaging and Shipment, Page A5-13 and FSP Section 5.11.2, Documents and Chain of Custody, Page A5-14:** Samples for physical parameter analyses do not have to be cooled or shipped in coolers, nor is it necessary to require the laboratory to record the temperature of these samples. Please revise the text to specify packaging, shipping and documentation procedures that are appropriate for physical parameter samples.

17. **Quality Assurance Project Plan (QAPP):** The QAPP does not include a table that summarizes all of the samples to be collected, including quality assurance/quality control samples. For each media and analytical method, please provide a table summarizing the total number of samples to be collected. Also, please indicate whether the purpose of the samples for each media are for screening purposes or for risk assessment.